Stoughton Steel

Massachusetts Manufacturing Extension Partnership

Stoughton Steel Gets Traction with ISO and Lean

Client Profile:
Stoughton Steel, founded in 1978, manufactures FlipPads, reversible pads that go on the 'feet' of the stabilizer legs of backhoes and rubber tired excavators. One side of the pad is made of soft rubber to protect whatever surface the stabilizers are set on while the 'flip side' has an aggressive surface to grip loose ground. The company's products have gained recognition from industry leaders such as Caterpillar, Case, New Holland, JBC, Kubota and Komatsu. Stoughton Steel also sells replacement FlipPads, as well as double-sided rubber and double-sided street pads, to equipment owners and manufacturers. The company's Hanover, Massachusetts facility employs 20 people.

Situation:
Stoughton Steel was encouraged to begin their Lean initiative when a new customer asked if they had their ISO certification. Since they have a strict policy for using only ISO certified suppliers they strongly suggested that Stoughton Steel get their certification and look into Lean if they hoped to grow and continue doing business in the future. Andris Lagsden, Director of Sales and Marketing for Stoughton Steel said, "I made some calls to the state (of Massachusetts) and they recommended that I contact the Massachusetts Manufacturing Extension Partnership (MassMEP), for assistance with both ISO and Lean."

Solution:
MassMEP Project Manager Rick Bowie helped Stoughton Steel apply for a Workforce Training Fund grant, which included the ISO component. "We wouldn't have been able to figure it all out and get the application together without Rick," said Lagsden. "In one month, we had everything ready to go and ultimately received a grant." MassMEP provided Basic Lean training for all Stoughton Steel's employees to familiarize them with Lean concepts and terminology. Bowie also instructed them in Kaizen, and they held several events throughout the facility to learn to identify and 'repair' areas of waste in their processes. TIPS (Team Involvement Problem Solving) training was also provided to help employees work more effectively as teams.
During one event, the team chose a problem area and focused the entire day on moving large machines they had never considered touching before, because of their size. By relocating the machines according to where and how they are used most, flow through the area improved significantly. A great deal of waste was also being caused by operators having to spend their time moving material throughout the facility rather than doing value added work. Incorporating signals that indicate when materials need to be replenished and locating tools and supplies near the work stations has decreased this waste dramatically. Another area the team focused on was the saw cutting area where materials enter through a rear door and then wait to be cut. The area was very chaotic and an eyesore when customers would visit. Using 5S (Sort, Set in Order, Shine, Standardize, sustain), they took critical people from saw and other departments and spent the day cleaning and organizing, building racks and tool boards, and getting everything up off the floor. As a result, enough space was

freed up in the area to allow for one day's storage of raw materials. Kanban signals were created so that off shift personnel would be able to tell what needed to be replenished. Visual signals also help the saw operator schedule his time by simply looking at the stock in specific locations twice a day and cutting to fill any bin that is below an identified minimum level. In the research and development area, the team decided to enclose the congested space into its own room. Walls were painted and storage space was created for items that had previously looked like clutter. Now the research and development area makes a much more attractive first impression.

Earning their ISO certification positioned Stoughton Steel to work with new ISO-certified customers. Eric Lagsden, Stoughton's Vice President of Manufacturing, said, "Tracking for ISO has helped on many levels, with productivity, quality and with our suppliers. For instance, we did lots of 5S to clean and unclutter the saw area and realized that we were keeping too much inventory and that it was not being tracked well. Now we use visual Kanbans to control inventory and tell the employees when a particular material is depleted to a certain level and needs to be reordered. We also track non-conforming materials, which is so much easier with the controlled inventory. When there is less material to keep track of, the employees can watch inventory and can see quality problems before they become issues. We can also tell if there is a particular machine that is causing damage to the product and may need a new part or repair. Quality and productivity have improved, and we can keep tighter control of costs. We can now track the suppliers as well as our own departments, and if they do not perform well a corrective action report is filed. These reports indicate inefficiencies in shipping and receiving and help us make improvements."

Results:

* Achieved ISO certification.
* Increased productivity by 15 percent.
* Increased production in saw cutting area by 15 percent.
* Achieved 100 percent on-time delivery.
* Improved employee morale and workplace safety.

Testimonial:

"Lean has really helped morale here. We get employees' feedback and put their ideas into play -- this also helps with sustainment because the ideas are coming from them. The Lean and ISO have helped make the company into a solid team."

Eric Lagsden, Vice President of Manufacturing